

CLAIMS

1. (Previously Amended) A composite structure with at least one polyurethane layer, a support layer, and an optional adhesive layer placed between these layers, wherein at least one polyurethane layer contains a polyurethane having the formula (I)



wherein O-R¹-O is the radical of a polyole with primary and/or secondary hydroxyl functional end groups in which the primary and secondary hydroxyl functional groups of the polyole have a ratio of between approximately 2:1 and 1:6,

R¹ and R² independently represent an organic radical which includes aliphatic, cyclo-aliphatic, aromatic and/or heterocyclic groups and

n is an integer number between 1 and 50,000.

2. (Original) The composite structure according to claim 1, wherein the at least one polyurethane layers comprises two polyurethane layers and wherein the outer and/or the inner polyurethane layer include a polyurethane of the formula (I).

3. (Original) The composite structure according to claim 2, wherein the polyole has a molecular weight from approximately 2000 to approximately 12,000.

4. (Original) The composite structure according to claim 1, wherein the polyole is a polyether glycol and/or a polyester glycol.

5. (Original) The composite structure according to claim 4, wherein the polyol is a poly-(oxypropylene) glycol and the polyester glycol comprises glycols of 2, 3 and 4 carbon atoms.

6. (Currently Amended) A composite structure with at least one layer, a support layer, and an optional adhesive layer placed between these layers, wherein at least one polyurethane layer contains a polyurethane having the formula (I)



wherein O-R¹-O is the radical of a polyole with primary and/or secondary hydroxyl functional end groups wherein the polyole is a polyether glycol and/or a polyester glycol, the primary and secondary hydroxyl functional groups of the polyole have a ratio of between approximately 2:1 and 1:6, and wherein the polyether glycol is a poly-(oxypropylene) glycol and the polyester glycol comprises glycols of dimeric fatty acids,

R¹ and R² independently represent an organic radical which includes aliphatic, cyclo-aliphatic, aromatic and/or heterocyclic groups and

n is an integer number between 1 and 50,000.

7. (Original) The composite structure according to claim 6, wherein the functional and/or tri-functional.

8. (Original) The composite structure according to claim 7, wherein the ratio of the di-functional polyols to the tri-functional polyols is between approximately 1:2 and 5:1.

9. (Original) The composite structure according to claim 8, wherein in that the radical R^2 is based on isphoron diisocyanate and/or hexamethylene diisocyanate.

10. (Original) The composite structure according to claim 8, wherein the radical R^2 is based on diphenylmethane diisocyanate (MDI) and/or toluylene diisocyanate.

11. (Original) The composite structure according to claim 10, wherein that the polyurethane layer(s) which contain(s) the polyurethane according to formula (I), have/has a solid content of at least approximately 95%.

12. (Original) The composite structure according to claim 11, wherein the polyurethane layer(s) which contain(s) the polyurethane according to formula (I), have/has a thickness of approximately 0.2 mm to 0.5 mm.

13. (Original) The composite structure according to claim 12, wherein the polyurethane layer(s) which contain(s) the polyurethane according to formula (I), have/has a density of approximately 0.3 g/ml to 0.8 g/ml.

14. The composite structure according to claim 13, wherein the polyurethane layers which contain the polyurethane according to formula (I) have a content of volatile organic chemicals (VOC) below approximately 100 ppm.

15. (Original) The composite structure according to claim 14, wherein the composite structure has a grain.

Claims 16-27. Withdrawn.

28. (Original) The composite structure according to claim 1, wherein the support layer is a textile layer.

29. (Original) The composite structure according to claim 1, wherein the support layer is made of PVC.

30. (Original) The composite structure according to claim 1, wherein the support layer is made of polyolefine.

31. (Original) The composite structure according to claim 1, wherein the support layer is made of polyurethane foam.